



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/064,436	07/12/2002	William H. Moody II	CROSS1530	2492

25094 7590 10/19/2004

GRAY, CARY, WARE & FREIDENRICH LLP
2000 University Avenue
E. Palo Alto, CA 94303-2248

EXAMINER

WILSON, YOLANDA L

ART UNIT	PAPER NUMBER
----------	--------------

2113

DATE MAILED: 10/19/2004

3

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/064,436

Applicant(s)

MOODY ET AL.

Examiner

Yolanda Wilson

Art Unit

2113

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 July 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-39 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-39 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 2.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Objections

1. Claims 32,33,34 are objected to because of the following informalities: These claims contain in their preamble 'The method of...'. The preamble for these claims should be 'The software product...'. Appropriate correction is required.

Claim Rejections - 35 USC § 101

2. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

3. Claim 31 is rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. Claim 31 recite 'a software product...'. Thus, these claims merely recite a program per se, which is not permissible under the Examination Guidelines for Computers - Related Inventions. The examiner suggests the following as a way to correct those claims: A computer program product having a computer readable medium with computer readable program code stored thereon, said computer readable code comprising...' Claims 32-39 are also rejected because they are dependent on claim 31.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

5. Claims 1-39 are rejected under 35 U.S.C. 102(a) as being anticipated by Bakke et al. (US Publication Number US 20020065962A1). As appears in claim 1, Bakke et al. discloses a host device having two or more ports configured to be coupled to a sequential device via corresponding links, wherein the host device is configured to associate a command identifier with a command, to transmit the command via a first one of the ports, to detect a failure associated with the transmission of the command via the first one of the ports, and to transmit the command via a second one of the ports on page 5, paragraphs 0036, 0037. The sequential device is the storage device to which the adapter is connected to.

6. As per claim 2, Bakke et al. discloses wherein the host device is configured to associate the command identifier with the command by counting commands transmitted from the host device to the sequential device and associating the count with the corresponding command, the system further comprising a router coupled between the host device and the sequential device, wherein the router is configured to count commands transmitted from the host device to the sequential device and to associate the count with the corresponding command on page 5, paragraph 0039. The router is the redundancy manager.

7. As per claim 3, Bakke et al. discloses wherein the host device is configured to initiate transmission of a set of commands to the sequential device by issuing a first command to establish a command stream, wherein the host device and the router are configured to begin counting commands after receiving the first command on page 5, paragraphs 0037, 0039.

8. As per claim 4, Bakke et al. discloses wherein the host is configured to make the command identifier explicit in the command on page 5, paragraph 0039.

9. As per claim 5, Bakke et al. discloses wherein the host device is further configured to transmit subsequent commands and corresponding command identifiers via the second one of the ports on page 5, paragraph 0039; page 7, paragraph 0054.

10. As per claim 6, Bakke et al. discloses two or more communication links corresponding to the two or more ports on page 5, paragraph 0035.

11. As per claim 7, Bakke et al. discloses wherein the communication links comprise Fibre Channel links on page 4, paragraph 0029.

12. As per claim 8, Bakke et al. discloses wherein the communication links are configured to provide Class 3 service on page 4, paragraph 0029. Class 3 service is part of Fibre Channel.

13. As per claim 9, Bakke et al. discloses a router coupled to the communication links to receive the command and command identifier from the host device, wherein the router is configured to be coupled to the sequential device on page 5, paragraph 0039.

14. As per claim 10, Bakke et al. discloses wherein the router is configured to: identify the command identifier transmitted via the second one of the ports as identical to the command identifier transmitted via the first one of the ports; and forward a portion of the command to the sequential device, wherein the forwarded portion of the command comprises a portion of the command that was not received by the sequential device via the first one of the ports on page 5, paragraph 0039.

15. As per claim 11, Bakke et al. discloses the host is configured to request a status of the command via the second one of the ports on page 5, paragraphs 0039,0054.

16. As per claim 12, Bakke et al. discloses wherein the host is configured to receive an indication of a number of data bytes received by the router in response to requesting the status of the command on pages 5 and 7, paragraphs 0039,0054.

17. As per claim 13, Bakke et al. discloses wherein the host is configured to request that error recovery begin with a next data byte following a last received data byte on page 7, paragraph 0054.

18. As per claim 14, Bakke et al. discloses wherein the host is configured to receive an indication of acceptance to beginning error recovery on page 7, paragraph 0054.

19. As per claim 15, Bakke et al. discloses a sequential device coupled to the router to receive the command on page 5, paragraph 0037.

20. As per claim 16, Bakke et al. discloses wherein the sequential device comprises a tape drive on page 4, paragraph 0029.

21. As per claim 17, Bakke et al. discloses wherein the sequential device comprises a SCSI device on page 4, paragraph 0029.

22. As per claim 18, Bakke et al. discloses a sequential device coupled to the communication links to receive the command and command identifier from the host device on page 5, paragraph 0037.

23. As per claim 19, Bakke et al. discloses wherein the host device is configured to request a status of the command via the second one of the ports on page 7, paragraph 0054.

Art Unit: 2113

24. As per claim 20, Bakke et al. discloses wherein the host device is configured to receive a number of data bytes received in response to requesting the status of the command on page 5, paragraphs 0039,0054.

25. As per claim 21, Bakke et al. discloses wherein the host device is configured to request that error recovery begin with a next data byte following a last received data byte on pages 5 and 7, paragraphs 0039,0054.

26. As per claim 22, Bakke et al. discloses wherein the host device is configured to receive an indication of acceptance to beginning error recovery on page 7, paragraph 0054.

27. As per claims 23,31, Bakke et al. discloses associating a first command identifier with a first command; transmitting the first command via a first link; detecting a failure of the first link; and transmitting at least a portion of the first command and first command identifier via a second link on page 5, paragraphs 0036, 0037.

28. As per claims 24, 32 The method of claim 23, the method is implemented in a host and a router coupled between the host and a sequential device, wherein associating a first command identifier with a first command comprises the host and the router counting commands transmitted from the host device to the sequential device and associating the count with the corresponding command, and wherein transmitting the first command via a first link, detecting a failure of the first link and transmitting at least a portion of the first command and first command identifier via a second link are performed by the host on page 5, paragraphs 0036,0037,0039.

29. As per claims 25,33, Bakke et al. discloses initiating transmission of a set of commands to the sequential device by issuing a first command to establish a command stream, wherein the host device and the router are configured to begin counting commands after receiving the first command on page 5, paragraphs 0037,0039.

30. As per claims 26,34, Bakke et al. discloses wherein associating the first command identifier with the first command comprises making the first command identifier explicit in the first command on page 5, paragraph 0039.

31. As per claims 27,35, Bakke et al. discloses prior to transmitting at least a portion of the first command and first command identifier via a second link, requesting a status of execution of the first command, receiving the status of execution of the first command, requesting recovery starting at a next byte following a last byte previously received and receiving acknowledgement of acceptance of the recovery request on page 5, paragraph 0039 and page 7, paragraph 0054.

32. As per claims 28,36, Bakke et al. discloses wherein the status indicates a number of bytes of the first command actually received by the router on page 5, paragraph 0039 and page 7, paragraph 0054.

33. As per claim 29, Bakke et al. discloses receiving at the router the first command and first command identifier via the second link and executing an unexecuted portion of the first command on page 5, paragraph 0039 and page 7, paragraph 0054.

34. As per claim 30, Bakke et al. discloses identifying the first command and first command identifier received via the second link, identifying a redundant portion of the

first command received via the second link and discarding the redundant portion of the first command on page 5, paragraph 0039 and page 7, paragraph 0054.

35. As per claim 37, Bakke et al. discloses wherein the software product is implemented in a device driver on page 3, paragraph 0027.


36. As per claim 38, Bakke et al. discloses wherein the software product is implemented in a shim driver between a device driver and a command driver on page 3, paragraph 0027.

37. As per claim 39, Bakke et al. discloses wherein the command driver comprises a SCSI driver on page 3, paragraph 0027.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Yolanda Wilson whose telephone number is (571) 272-3653. The examiner can normally be reached on M-F (7:30-4:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Beausoliel can be reached on (571) 272-3645. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


ROBERT BEAUSOLIEL
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100